CTIA
Building The Wireless Future
Cellular Telecommunications Industry Association

EX PARTE OR LATE FILED

February 3, 1999

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Ms. Magalie Salas
Secretary
Federal Communications Commission
1919 M Street, N.W., 2nd Floor
Washington, D.C. 20554

Re: Ex Parte Presentation
CC Docket No. 95-116
WT Docket No. 98-229
Forbearance from Wireless Number Portability ("WNP") Requirements

Dear Ms. Salas:

Today, February 3, 1999, the Cellular Telecommunications Industry Association ("CTIA"), represented by Michael Altschul, Vice President/General Counsel, has attached for filing, a letter to Jeanine Poltronieri, Senior Counsel, Wireless Telecommunications Bureau.

Pursuant to Section 1.1206 of the Commission's Rules, an original and one copy of this letter and its attachments are being filed with your office. If you have any questions concerning this submission, please contact the undersigned.

Sincerely,

Lolita Smith

Lolita D. Smith

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List ABCDE

CTIA
Building The Wireless Future.
Cellular Telecommunications Industry Association

Michael F. Altschul
Vice President/General Counsel

February 3, 1999

Jeanine Poltronieri
Senior Counsel
Wireless Telecommunications Bureau
Federal Communications Commission
2100 M Street
Washington, D.C. 20554

Re: **Ex Parte Presentation**
CC Docket No. 95-116
WT Docket No. 98-229
Forbearance from Wireless Number Portability ("WNP") Requirements

Dear Ms. Poltronieri:

The purpose of this letter is to provide the information you have requested regarding: (1) the progress of industry standards work, (2) the proposal(s) submitted by the Telecommunications Resellers Association ("TRA proposal") regarding wireless number portability, and (3) further clarification of the date CTIA has asked the Commission to forbear from WNP and then conduct a review to take a "fresh look" at the competitive issues concerning wireless carriers' number portability obligations.

I. Standards Work Update

CTIA reported on the status of industry standards work in an *ex parte* letter addressed to Steve Weingarten on August 25, 1998. For ease of reference, that filing is attached hereto as exhibit 1. As explained in that filing, the wireless number portability standards work for IS-41 providers (cellular analog and digital CDMA and TDMA) was being conducted by the TR-45.2 Ad Hoc Committee for Wireless Number Portability. We indicated at that time that TR-45.2 had completed a final review of the Phase 2 standard, which would allow wireless carriers to port numbers, and had sent the

document out for letter ballot. Since that time, the standard was balloted and then approved for publication at the November 1998 meeting of TR-45.2. The Standards number for Phase II Wireless Number Portability is IS-756 Rev. A.

Similarly, CTIA understands that the WNP standards for GSM carriers are being worked in the T1P1/TR-46 ATIS-TIA committee. The standards work for Phase 2 addressing Short Message Service and number based services has been balloted but not yet published. Phase 3 standards work in this committee covers roaming capabilities.

It is important once again to note that completion and publication of a standard is not the same as having a commercially available product that has been tested to ensure network reliability. Vendors still must develop equipment and software that meets the industry specifications once the standard is published. Historically, this development takes 18-24 months. Once vendors have developed compliant products, the industry must test the network hardware and software upgrades in a field trial environment to ensure reliability, quality and integrity of service. This process typically takes a minimum of 6 months and is critical for successful WNP implementation in a nationwide roaming environment.

In addition, the timing of WNP capability is dependent on the resolution of the issues associated with wireless-wireline integration. Even if CMRS network architecture changes were complete and fully tested for network reliability, in the absence of a solution, the wireless-wireline integration problem would still stand in the way of successful WNP. As CTIA noted in its Comments to the Numbering Resource Optimization proceeding earlier this year, the NANC submitted its Wireless-Wireline Integration Report to the Commission, elevating two very difficult and critical issues for Commission determination because no consensus could be reached among the NANC.[1] Consensus could not be reached regarding rate centers and provisioning intervals. Once decisions are made regarding wireless-wireline integration, it will take additional effort and time to develop standards and implement the necessary changes. Currently, CTIA is not aware of any schedule for achieving wireless-wireline integration.

II. TRA Proposal for WNP

The Telecommunications Resellers Association ("TRA") has proposed and re-proposed its solution for WNP as a superior alternative to the MIN/MDN separation.[2] TRA's proposal employs 10 digit Global Title Translation ("GTT"), which, long before it was proposed by TRA, the wireless industry fully considered and rejected at a 1996

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[1] CTIA Comments to the Numbering Resource Optimization proceeding, filed in CC Docket 95-116 on December 21, 1998, refiled in NSD File No. L-98-134, December 22, 1998, at 15.

[2] TRA initially presented its proposal in an *ex parte* presentation from Linda Oliver, Counsel for TRA, filed October 22, 1998. TRA filed the same alternative method in an *ex parte* presentation from David Gusky, Vice President of TRA, filed November 24, 1998.

Number Portability Forum sponsored by CTIA. As CTIA explained in an earlier *ex parte* filing, attached hereto as exhibit 2, the industry explored and considered a variety of technical approaches to providing CMRS number portability, including 10 digit GTT. The salient point is that the industry reached the conclusion, through an open and consensus-driven process, that the separation of the MIN/MDN was the best technical approach for a number of reasons.

Moreover, CTIA reported on its progress at every major step in the process, even though the Commission had not sought to involve itself in the industry's decision-making process. In this regard, the Commission should act consistent with the conclusion of the *First Report and Order* that "establishing performance criteria that a LEC's number portability architecture must meet would better serve the public interest than choosing a particular technology or specific architecture."[3] The Commission's decision was based, in part, on the existing "sufficient momentum to deploy compatible methods" and a desire to not interrupt or delay the implementation of a standard. Similarly, the wireless industry's selection of the MIN/MDN separation as the most appropriate technical solution to WNP, the diligent work to complete standards by TIA technical committees, and deployment of these standards to vendors for the development of commercially available products constitutes "sufficient momentum" that should not be disturbed or delayed, especially by an unproven alternative. Just as the Commission declined to recommend specific LNP architecture for the wireline industry, the Commission should not entangle itself in the selection of technical standards for the wireless industry.[4]

TRA was encouraged several months ago to formally submit their documentation to the standards bodies as CTIA has done with the CTIA Wireless Report on Number Portability. Thus far, TRA has not submitted its technical document to the requisite technical standards bodies for consideration. This is especially disturbing since TRA not only challenges the technical solution accepted by the industry, but also makes assumptions regarding costs associated with 10 digit GTT that have not been subject to formal standards review by expert carriers and vendors. Absent such review, cost estimates are impossible to ascertain. At the 1996 Number Portability Forum, the industry rejected 10 digit GTT because it would require extensive administrative overhead to manage data tables listing each and every subscriber. Additionally, 10 digit GTT would necessitate both substantial modifications to CMRS billing systems and changes to the network architecture necessary for roaming.

As the attached viewgraphs illustrate (exhibit 3), use of the MSID, *i.e.*, MIN/MDN separation, is the superior approach to facilitating roaming, *i.e.*, inter-carrier communications. The viewgraphs indicate that the volume of current and projected inter-carrier messaging requirements necessary to support 10 digit GTT is too onerous for SS7 resident application. Significant revisions and enhancements of the SS7 networks and the

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[3] In the Matter of Telephone Number Portability, *First Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd. at 8377, ¶ 46.

[4] *See Id.*

associated STPs, VLRs and HLRs, involving implementation of the TRA proposal, is more time consuming than the current industry proposal.

Adoption of the TRA alternative at this date would delay, not advance, wireless carriers' ability to provide WNP because the standards process would need to be used. The industry standards process performs a vital function. Standards facilitate interoperability among products and common communication protocols. Employing 10 digit GTT as this juncture would require the work to develop and ballot standards, develop commercial products, and perform field tests of those products. There is simply no substitute for the process, no matter what the technical solution is.

III. WNP Forbearance Expiration

In the Forbearance Petition, CTIA requested that the Commission forbear from enforcing the June 30, 1999 implementation deadline for WNP at least until the five-year buildout period for PCS carriers has expired. CTIA also stated that at the end of the five year buildout period, if the Commission determined that it was in the public interest, the Commission could review the state of competition in the CMRS marketplace anew and determine whether imposition of WNP was necessary.

In the Public Notice regarding the sunset of the resale rule applicable to certain covered CMRS providers, the Commission announced that it had completed its award of the last group of initial licenses for currently allocated broadband PCS spectrum on November 25, 1997, thus the five year PCS buildout period had commenced on that date. The five year buildout period closes, therefore, on November 24, 2002.[5] CTIA supports the use of the November 24, 2002 date as the date requested in its Forbearance Petition.

Pursuant to the Commission's *ex parte* rules, this letter has been appropriately filed today with the Secretary's office. If you have any questions regarding this submission, please give me a call at (202) 736-3248.

Sincerely,

Michael Altschul /LS

Michael F. Altschul

Enclosures

cc: Tom Sugrue, Chief, WTB

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[5] Commencement of Five-Year Period Preceding Termination of Resale Rule Applicable To Certain Covered Commercial Mobile Radio Service Providers, *Public Notice*, Common Carrier Bureau, CC Docket No. 94-54, DA 98-1337, July 2, 1998.

EXHIBIT 1

CTIA
Cellular Telecommunications Industry Association

August 25, 1998

Ms. Magalie R. Salas
Secretary
Federal Communications Commission
1919 M Street, N.W. Room 222
Washington, D.C. 20554

Re: Ex Parte Presentation
CC Docket # 95-116 (Number Portability)

Dear Ms. Salas:

Today, August 25, 1998, the Cellular Telecommunications Industry Association ("CTIA"), represented by Michael F. Altschul, have attached, for filing, a letter to Steve Weingarten, Chief, Commercial Wireless Division, Wireless Telecommunications Bureau, with copies to several listed staff members.

Pursuant to Section 1.1206 of the Commission's Rules, an original and one copy of this letter and its attachments are being filed with your office. Also, four copies of these materials are being filed for your convenience. If you have any questions regarding this submission, please contact the undersigned.

Sincerely,

Lolita Smith

Lolita D. Smith

CTIA
Cellular Telecommunications Industry Association

August 25, 1998

Steve Weingarten, Esq.
Chief, Commercial Wireless Division
Wireless Telecommunications Bureau
Federal Communications Commission
2100 M Street
Washington, D.C. 20554

Re: Wireless Number Portability Standards Progress

Dear Mr. Weingarten:

The purpose of this letter is to provide the information you have requested regarding the industry standards process, as well as to inform the Wireless Telecommunications Bureau regarding the progress of industry efforts to meet the deadlines imposed by the Commission in the First Report and Order.[1] As you know, the Wireless industry is working diligently to meet the CMRS number portability deadlines. Any other conclusion is not only counterfactual, but reflects a misunderstanding of how the standards setting process operates and the complexities of implementing standards to support nationwide roaming.

Standards bodies typically break technical challenges into stages or phases – in order to direct and define the scope of their work and establish milestones commensurate with regulatory deadlines. Although these phases may vary according to the difficulties inherent to a particular technology or with the technical challenges facing a standards body, regulatory deadlines impose uniform considerations. The specifics of how different standards committees have divided up their work into *phases* are discussed below. However, Phase 1 generally represents industry efforts to meet the number portability query message deadline. Similarly, Phase 2 generally covers wireless carriers' ability to provide service provider number portability in the top 100 MSAs, and the ability to support nationwide roaming. Phase 3 generally covers more enhanced network features.

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1 First Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd. 8352 (1996), CC Docket No. 95-116 ("First Report and Order").

In response to your request for information on the status of industry standards work for Wireless Number Portability ("WNP"), CTIA has compiled the following report. Currently, WNP standards are being worked in three separate Telecommunications Industry Association ("TIA") standards committees because the scope of this mandate touches nearly every aspect of network operations. This separation allows the various technologies to be worked in detail. These committees, TR-45.2, T1P1/TR-46, and T1S1.6 all work independently but have established liaisons to share relevant issues. After each committee divides the work volume into phases, it then issues *letter ballots* to the industry on 30-day or 60-day cycles for approval and comments.

Part of the problem and difficulty in predicting an exact standards deadline is due to the myriad of outcomes from the ballot process. As part of the standards setting process, TIA members may respond to comments in one of three ways: (1) Approved, (2) Approved with minor comments, or (3) Submitted back to the committee with extensive comments. If the standards committees receive extensive comments, then additional time must be spent resolving all associated issues before sending the standard back to the industry for re-ballot. As a matter of practice, it is not uncommon for extensive commenting and reballoting when facing a difficult technical challenge.[2] This is the acknowledged TIA practice used to reach industry wide consensus.

TR-45.2

WNP standards for **IS-41** providers (cellular analog and digital CDMA and TDMA) are being worked in the **TR-45.2 Ad Hoc Committee for Wireless Number Portability**. This committee has completed a final review of the Phase 2 standard. The Phase 2 standard will allow wireless carriers to port numbers. TR-45.2 sent the document out for letter ballot this month, (August 1998) on a 30-day ballot cycle. This committee will review all ballots during September and will develop a schedule to resolve the comments. TR-45.2's work plan has targeted completion of the Phase 2 standard by the end of 1998. In addition, further work is ongoing for the Phase 3 of the WNP standard for these technologies. This phase covers more enhanced network features for Wireless Number Portability including Congestion control (ACG), Short Message Service (SMS), HLR optimization or enhancements, and Feature Interactions. Phase 3 will undergo the same balloting process and is scheduled for committee completion in the first quarter of 1999.

T1P1/TR-46

Similarly, WNP standards for GSM carriers are being worked in the **T1P1/TR-46 ATIS-TIA** committee. Phase 1, covering the number portability query message is already published. However, Phase 2 work addressing Short Message Service and number based

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[2] Indeed, the TR-45.2 WNP committee received extensive comments and reballoting for the Phase 1 standard. Phase 1 was defined as meeting the number portability query message deadline.

services is not scheduled for completion until the end of 1998. Once the committee completes its work, the standard will go out for ballot in the First Quarter of 1999, and be returned to the committee for any necessary modifications. Phase 3 standards work in this committee, covering roaming capabilities, is scheduled for completion the first quarter of 1999.

T1S1.6

Finally, standards efforts addressing wireline -- wireless interoperability issues is being handled in committee **T1S1.6**. This committee currently has three documents in the ballot stage, which closes August 26, 1998. **T1S1.6** standards work includes:

- LB 702 Technical Requirements for Number Portability -Operator Services Switching Systems
- LB 703 Technical Requirements for Number Portability -Switching Systems
- LB 704 Technical Requirements for Number Portability- Database and Global Title Translation

The T1S1.6 workplan also schedules completion of these three standards by the end of 1998. If these technical standards are completed by December 1998, during the First Quarter of 1999, the industry can move forward to the next stage of implementation. Vendors can develop equipment and software that meets industry specifications once the standard has been published. Historically, this takes 18-24 months. Once the vendors have developed compliant products, the industry must test the network upgrades in a field trial environment to ensure the reliability, quality and integrity of the service. This process typically takes a minimum of 6 months and is of great concern to the industry.[3] Testing for network reliability is critical for successful Wireless Number Portability implementation in a nationwide roaming environment.

It should be emphasized that the schedule adopted by these standards committees is unprecedented, and the workplans are moving quickly towards completion. Committee members are meeting each month to complete the technical standards. However, vendors cannot develop the necessary network upgrades until these standards are completed. Likewise, the wireless industry cannot test network reliability until all the hardware and software upgrades are available from the vendors. Therefore, it is clear today that the minimum requirements to perform wireless number portability will not be in place on June 30, 1999.

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[3] See Comments of The Cellular Telecommunications Industry Association filed August 10, 1998, CC Docket No. 95-116 (responding to the Wireline Wireless Integration Report); See also Ex Parte Letter regarding Nine Month Extension of Implementation Deadline Applicable to CMRS Providers for Telephone Number Portability filed by CTIA, August 13, 1998.

Sincerely,

Michael F. Altschul /ls

Michael F. Altschul

cc: Jeanine Poltronieri
Janice Jamieson
Clint Odom
Paul D'Ari

EXHIBIT 2

CTIA
Cellular Telecommunications Industry Association

Michael F. Altschul
Vice President/General Counsel

CTIA STAMP & RETURN

November 30, 1998

RECEIVED
NOV 30 1998
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Ms. Magalie Salas
Secretary
Federal Communications Commission
1919 M Street, N.W. 2nd Floor
Washington, D.C. 20554

Re: CC Docket No. 95-116
Ex Parte Presentation

Dear Ms. Salas:

On Wednesday, November 18, 1998, the Cellular Telecommunications Industry Association ("CTIA") and its Numbering Advisory Group met with Commission staff to discuss the wireless number portability issues raised in the above-referenced proceeding. During that meeting, Ms. Radley-Teicher asked CTIA to document the decision to adopt the separation of the mobile station's MIN from the CMRS customer's MDN as the wireless industry's approach for implementing CMRS number portability.

As requested, CTIA hereby resubmits the following materials to the Commission:

- CTIA's Petition for Clarification and/or Reconsideration, filed August 21, 1996, which describes the open industry forum and process that will be used to develop an architecture for CMRS number portability;
- CTIA's Petition for Extension of Implementation Deadlines, filed November 24, 1997, which includes the CTIA Report on Wireless Number Portability, Version 1.0;
- *Ex Parte* letter, filed July 20, 1998, which includes the CTIA Report on Wireless Number Portability, Version 2.0;[1]

[1] In addition to being filed with the Commission in this proceeding, CTIA's Report on Wireless Number Portability, Version 1.0 and Version 2.0, were also submitted to the NANC and the appropriate NANC working groups.

In addition to these materials, CTIA hereby submits the report of its Number Portability Forum, held October 9-11, 1996, in Las Vegas, NV. The Forum Report in summary form describes the various proposals presented to the Forum, and provides an excellent overview of the discussion points raised by the Forum attendees. In particular, the Forum Report, and the ten written submissions (attached as Exhibits 1-10 of the Forum Report) demonstrates that the wireless industry carefully considered a variety of approaches to providing CMRS number portability and reached its conclusion through an open and consensus-driven process.

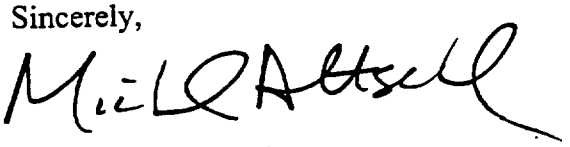
Exhibits 1-10 identify a wide range of alternatives for wireless number portability implementation. The Forum Report describes how the wireless industry, following reasoned consideration of all suggested implementation options, reached a consensus agreement to separate the MIN from the MDN. The decision to separate the MIN from the MDN was deemed to be the best alternative for a number of reasons, including its avoidance of the need to provide 10-digit Global Title Translation ("GTT") to complete CMRS calls, and the benefits associated with the industry's evolution towards the use of IMSI numbers.

The Telecommunications Resellers Association recently has proposed that the wireless industry adopt 10-digit Global Title Translation as a superior alternative to the MIN/MDN separation. At its 1996 meeting, the Number Portability Forum participants fully considered 10-digit GTT as a solution to wireless number portability. As noted in Exhibit 1 (the presentation of AT&T Wireless), technical approaches utilizing 10-digit GTT analysis would require extensive administrative overhead to manage data tables listing each and every subscriber. Additionally, 10 digit GTT would necessitate substantial modifications to CMRS billing systems.

While hindsight is said to be 20-20, CTIA continues to believe that the MIN/MDN separation is the best approach to implementing CMRS number portability. However, in response to Ms. Radley-Teicher's question, the salient point is that the wireless industry considered a broad range of technical solutions in an open forum and settled on a solution that would best enable CMRS providers to meet their obligations under the Commission's rules. Moreover, CTIA reported on its progress to the Commission at every major step in the process, even though the Commission had not sought to involve itself in the industry's decisionmaking process.

Pursuant to Section 1.1206 of the Commission's Rules, an original and one copy of this letter are being filed with your office. If you have any questions concerning this submission, please contact the undersigned.

Sincerely,



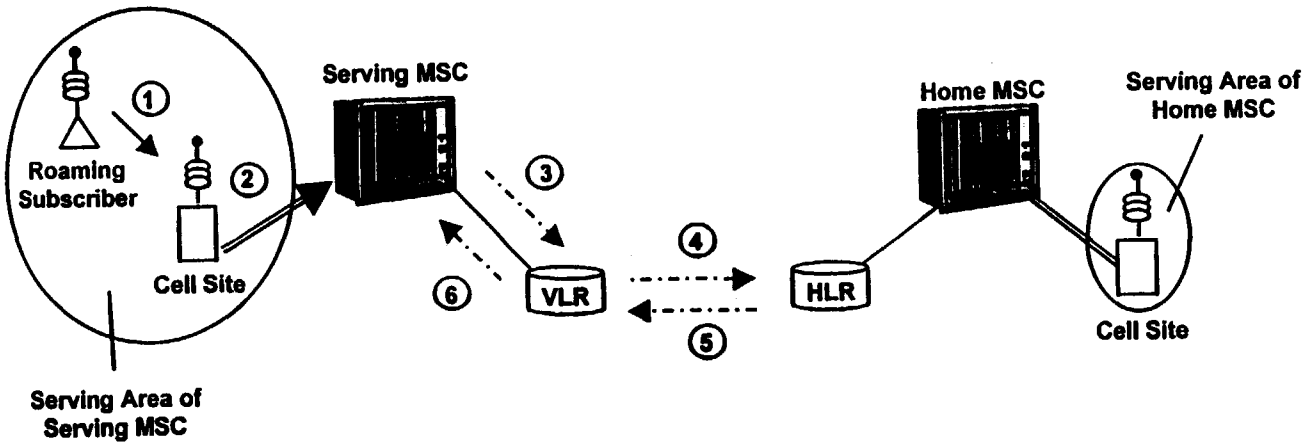
Michael F. Altschul

Cc: David Furth
Janice Jamison
Clint Odom
Charlene Lagerwerff
Blaise Scinto
Gail Radley-Teicher
Jeannie Grimes
Patrick Forster

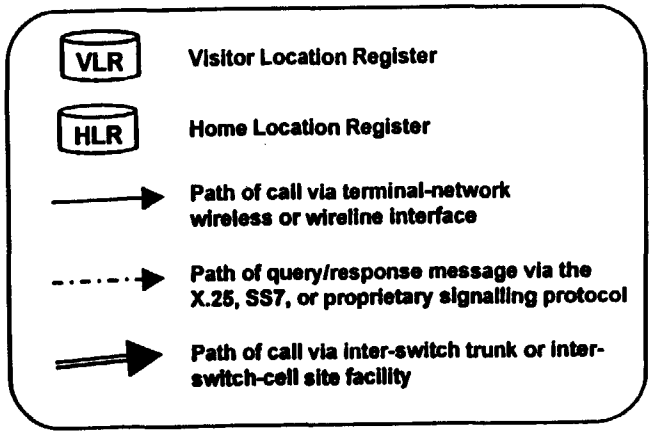
EXHIBIT 3

Use of MSID in inter-carrier communications

IS-41 Based Registration - pre MDN/MSID Separation

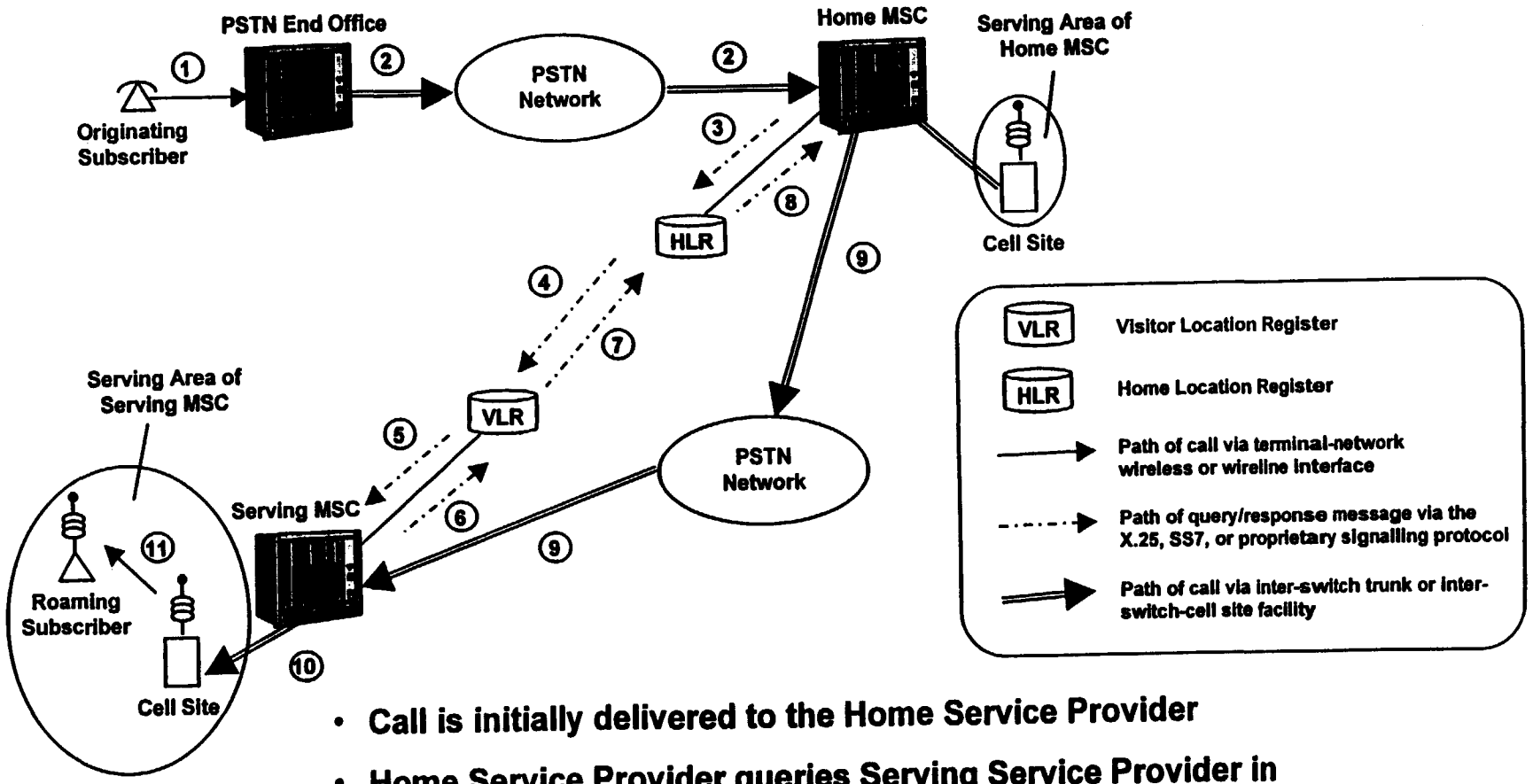


- **MSID = MIN = 10-digit dialable NANP Compliant Number (NPA-NXX-XXXX)**
- **Determination of subscriber's Home Service Provider determined via a fixed mapping/translation process based on the most significant digits of the MIN (typically the NPA-NXX or NPA-NXX-X)**



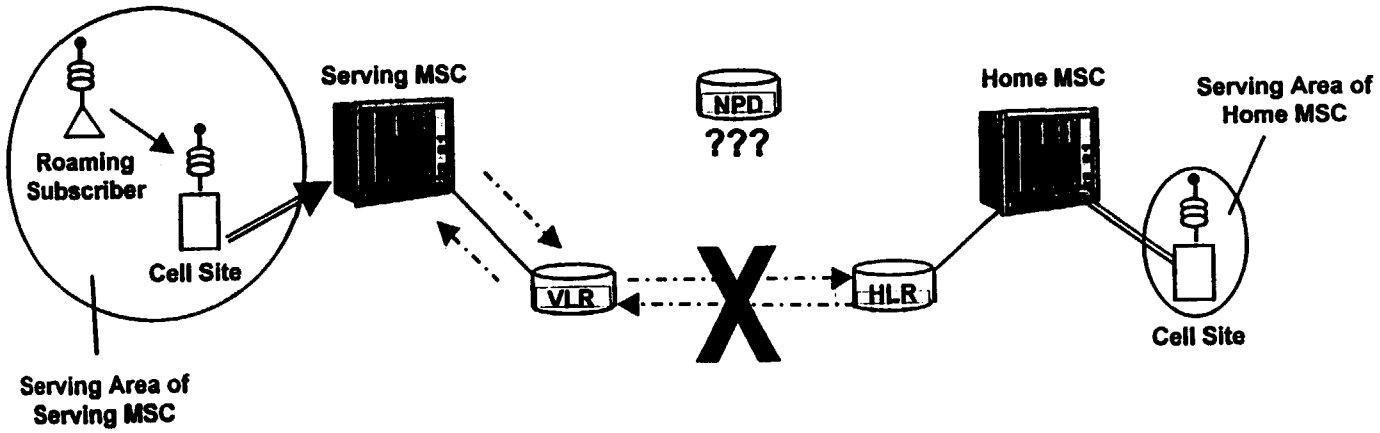
Use of MSID in inter-carrier communications

IS-41 Based Call Delivery (pre MIN/MSID Separation)

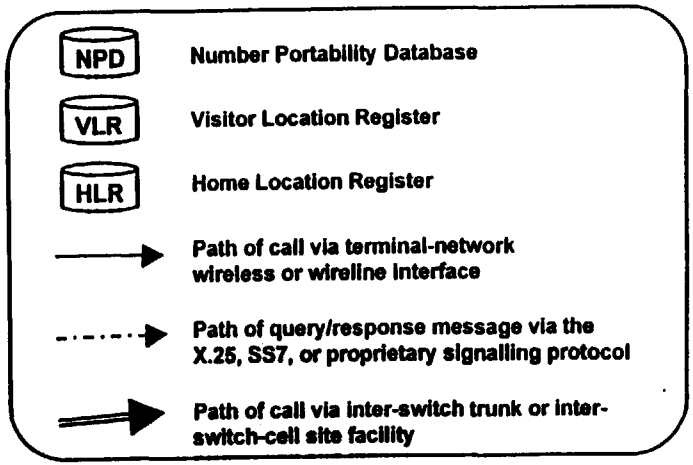


- Call is initially delivered to the Home Service Provider
- Home Service Provider queries Serving Service Provider in order to obtain a TLDN (Temporary Line Directory Number)
- Call is routed to the Serving Carrier based on the TLDN

Impact on LNP on Intercarrier Communications

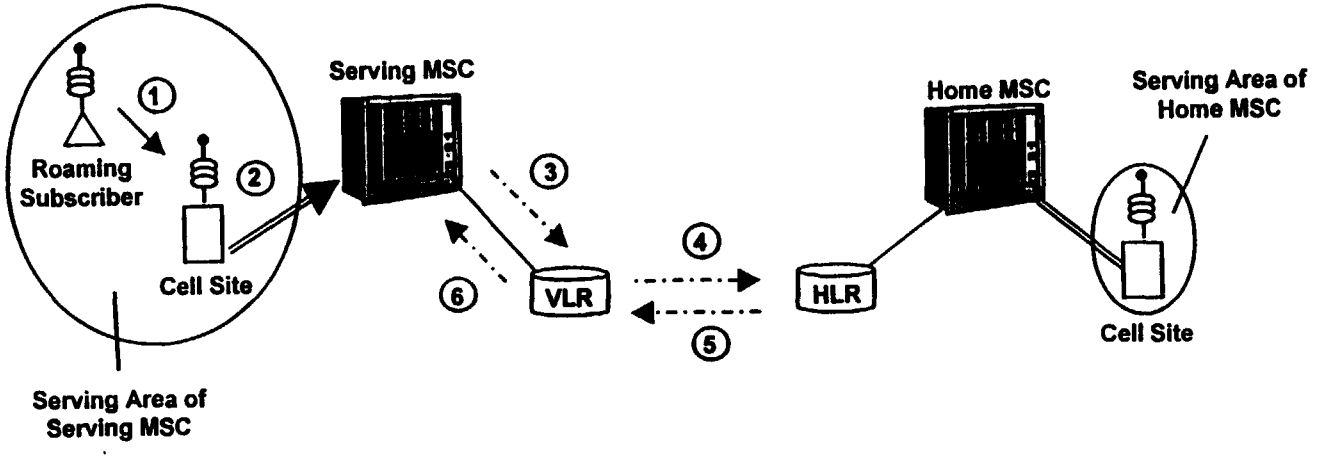


- If the MSID = MIN = DN mapping was to be maintained then the Home Service Provider could not be determined using existing procedures in an environment where MSID and MDN are separated.
- The use of a 10-digit GTT process on existing MSID = MIN = DN format was contemplated
- Volume of current and projected inter-carrier messaging requirements was considered too onerous for a SS7 resident application
- Other issues included other non-real time inter-carrier messaging requirements (e.g. billing records) and the use of other protocols (e.g. X.25)



Use of MSID in Inter-carrier Protocols

IS-41 Based Registration - post MDN/MSID Separation



- Solution: Separate MSID and MDN
- MSID = NON PORTABLE Station Identifier used in inter-carrier and air-interface protocols
- MDN = PORTABLE Directory Number used to access a particular wireless subscriber
- Separate MSID and MDN mitigates impact to inter-carrier operational procedures